

*SuJ. A1*

What is claimed:

1 ~~4.~~. A method for detecting the release of a single-stranded RNA from an RNA duplex which comprises;

5           a) admixing an RNA helicase with the RNA duplex under conditions permitting the RNA helicase to unwind the RNA duplex and release single-stranded RNA, wherein the RNA duplex comprises a first RNA having a first label attached thereto and a second RNA, such first label being capable of producing a luminescent energy pattern when the first RNA is present in the RNA duplex which differs from the luminescent energy pattern produced when the first RNA is not present in the RNA duplex;

15           b) subjecting the admixture to conditions which permit (i) the RNA helicase to unwind the RNA duplex and release single-stranded RNA, and (ii) the first label to produce luminescent energy; and

20           c) detecting a change in the luminescent energy pattern produced by the first label so as to thereby detect release of single-stranded RNA from the RNA duplex.

2 ~~4.~~. The method of claim 1, wherein in step (a) the conditions which permit the RNA helicase to unwind the RNA duplex and release single-stranded RNA comprise the presence of ATP and a divalent cation.

3 ~~4.~~. The method of claim 1, wherein the first label is present at the 5' end of the first RNA.

4 4. The method of claim 1 or 3, wherein a second label is attached to the 3' end of the second RNA and the luminescent energy pattern results from the interaction of luminescent energy released from the first label with the second label.

5 5. The method of claim 4, wherein the first and second label comprise fluorophors and the second label absorbs luminescent energy released from the first fluorophor.

10 6. The method of claim 5, wherein the first label is fluorescein isothiocyanate and the second label is rhodamine isothiocyanate.

15 7. A method of measuring the rate of release of a single-stranded RNA from an RNA duplex which comprises detecting whether the single-stranded RNA is released from the RNA duplex at predetermined time intervals according to the method of claim 1, and determining therefrom the rate of release of the single-stranded RNA from the RNA duplex.

20 8. A method of determining whether a compound is capable of modulating the release of a single-stranded RNA from an RNA duplex by an RNA helicase which comprises detecting the release of the single-stranded RNA from the RNA duplex according to the method of claim 1, wherein the compound is added to the mixture of step (a).

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